Plenary Session 2 on the value of protected areas for fauna conservation

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CHAIR: Dan Lunney (Royal Zoological Society of NSW).

PANEL: MIKE CALVER: (Murdoch University), **PAUL ADAM** (UNSW): **PEGGY EBY** (ecological consultant), **HARRY RECHER:** (Australian Museum).

DAN LUNNEY (chair): What crossed my mind when I was thinking about this forum was how difficult it is to reconstruct the story long after the key people have disappeared. I've been trying my hand in the last few years to put together some ecological histories. I have recently written one for Royal National Park. No one is now around who was part of the dedication of the Royal National Park in 1879. In fact, we just completed the history of Nadgee Nature Reserve together. Harry Recher is a co-author, and six months after it was finished Allan Fox, a key member of the writing team, died last year. It was his pivotal role in the 1950s that led to dedication of the Reserve in 1957. I think it's crucial to record these stories, and the views of the remarkable people who were there. The other thing I think is remarkable is the ecological approach of each of these individuals. It runs through everything they say.

Harry Recher has been very cross about a number of things, yet one of the pleasures is seeing the ebb and flow of the politics, but if you don't like it, it is really a very hard slog. However, I happen to like it. Harry, you commented, "It's time to invert the paradigm." Is it too late?

HARRY RECHER: (Australian Museum). Well, it's not too late. No, it's not too late, but we're not going to do anything. That's why it's too late. The sorts of things that we need to do to invert the paradigm, to change the way humanity is proceding, are unacceptable to our politicians, unacceptable to society, unacceptable to the 80,000 people who attended the AFL grand final. They're not going to give up their cars. They're not going to start thinking about the Australian continent in its entirety as a national reserve within which there are nodes of human activity. That's inverting a paradigm.

When I spoke at Murdoch University a week or so ago, and gave the Roby lecture, I had a slide in which I showed what the inverted paradigm would look like. What we have now is a city landscape within which there are little nodes of green and those nodes of green are diminishing rapidly. Inverting the paradigm, you have a nice green eucalyptus forest and little nodes of cities, mining sites, and agriculture. But we're not going to do that. We've got a government in every State, with the possible exception of South Australia, who in the last 12 months has done more to reverse environmental management and protection than has happened ever in human history. They've taken us back before the 1960s, and guess what, their popularity has increased. They're going to get re-elected because that's what Australians want. So too late? Yes, it's too late.

DAN LUNNEY: Thanks, Harry. Can I ask Paul Adam a question, and then we'll take some questions from the audience. Paul, one of my clear-cut memories of Peter Hitchcock, and John Whitehouse, and the key players in the team, and there was only a small team, is that they weren't zoologists. I talked to Peter Hitchcock, he didn't have time for the fauna. I said, "What about koalas?" He said, "I can put a cover picture with a koala. It'll help save the area but, Dan, we're not going to look for them."

To Peter Hitchcock, the view that you could spend time carrying out zoological surveys and understand the fauna ecologically wasn't possible. He was on an urgent mission. It's not that he didn't think it was important, but he didn't think there was anything like the amount of time for fauna studies. He saw small windows of opportunity with various politicians who were enthusiastic, and he was going to have maps with lines, air photographs with a plastic overlay, and a Chinagraph line on them. That's all he had time for, I think. Do you agree?

PAUL ADAM (UNSW): To a considerable extent, but I think he was a realist who recognised that you had to take the opportunity of any political window that opened. I would certainly say that in the case of rainforests, there are lots of questions which are fascinating and we don't know the answers to them. Certainly, from a management perspective, we need to know much more about pollination, seed dispersal and so on, those questions to which I don't know the answers, but are fascinating. Why is it, in a continent which, in a sense, it's known for being where termites are, and where termites might exist, there are only four species of indigenous termite in rainforests? It always seemed to me somewhat bizarre. When we have a continent in which birds play such an important role in pollination and rainforests were the dominant vegetation, why are birds such important pollinators in today's forests? I'd love to know the answers to those questions. It's interesting to reflect that one of Harry's missions was the conservation of littoral rainforests. Now, when nominations go up for World Heritage listing, the World Heritage Committee, in a sense, farms them out initially for valuation by one of the appropriate bodies - the IUCN if it's a national site.

Now, there have been occasions where IUCN has reported adversely to nominations and they got up. A classic example is that IUCN didn't want to have a bar of the Greater Blue Mountains when that nomination came up. They recommended strongly against, it but that was overturned. But when we came to do the rainforest nomination many years earlier we were keen, as far as possible, to include a full range of rainforests in New South Wales and so we very specifically chose Iluka as a littoral rainforest. We also had cryptic rainforest at Mount Dromedary because it's something completely different. Now, the IUCN said Mount Dromedary is far too far away from any of the other sites and removed it. We weren't able to win that battle.

They also couldn't understand why on earth you want to put forward a littoral rainforest, and IUCN argued very strongly that that should come out. Fortunately, we managed to keep Iluka in, but subsequently IUCN continued a sort of guerrilla warfare against Iluka. Every time there are changes to boundaries within the rainforest, and that's happened a few times, IUCN said, "Why don't you take Iluka out?" and in particular, when Fraser Island was listed they said, "Paul, look, now you've got a wonderful coastal site with rainforest. You can take Iluka out." I cannot understand why the peak international body fails to understand the special features of a littoral rainforest and in relation to Fraser Island, I would say that Fraser Island has fantastic rainforests. They are unique and, yes, they are on sand and they're close to the sea. They are not littoral rainforests as we understand it in terms of New South Wales coast and indeed, throughout the Pacific coast.

HARRY RECHER: When I mentioned that littoral rainforest is ignored by the Service from the scientific committee, I put up a proposal to protect all littoral rainforests along the north coast as a single management unit. I did that because each and every one of them was under growing threat from one thing or the other, residential development, mining, what have you, and it appeared to me that they represent an ecosystem in their entirety, and they needed to be managed in a way that was a single unit. It was rejected by Service personnel because the areas were all small, were all in areas of relatively high population density and many of them, if not all of them, are controlled by the Lands Department, and National Parks staff try to avoid having conflict with the Lands Department over who is going to get what piece of territory. So it's interesting to see what Paul was saying about Iluka and the IUCN.

BETH ROHRLACH: (I'm the professional officer for the Science Teachers Association of New South Wales). One of the things I want to raise with all the scientists in this room is a strengthening of community partnership. So if you want political power and political change you need to strengthen the voice of the community in those changes. One really fantastic example this year has been a partnership between BirdLife Australia and the National Parks Association of New South Wales on a one-week bathing bird survey that had 25,000 records submitted from around Australia from the members of the public. Those kinds of partnerships can make major changes in awareness of the public that then can have huge impacts on government. So, I'm just raising that issue for everyone to consider very seriously.

HARRY RECHER: I'm a great supporter of citizen science. I think community groups can contribute significantly. I think there's a problem with the vast majority of scientists not being interested in communicating with people and I've written about that at length. For the past 20 years, I explain why, because we don't teach English to scientists, so they can't talk, and if you can't talk it's not important, so you avoid doing it. But, you know, it goes the other way. You mention BirdLife Australia. I mentioned I worked in the Great Western Woodlands since 1997. I've done all the modern-day bird research ever done in the Great Western Woodlands, yet BirdLife Australia went ahead and got a quarter of a million dollar or a $400,000 grant from The Nature Conservancy to do bird work in Western Australia in the Great Western Woodlands. They never spoke to me.

I may be invited to a management committee. It goes two ways. If environmental groups want scientific information they also need to involve scientists. That was one of the great things about the Science Council of TWIS[1]. It brought together some of the world's greatest ecologists, some of the people most familiar with the Australian flora and fauna, and we put that information to work to advance TWIS into the 21st century. It's gone backwards now that they got rid of the Science Council, but it's got to be both ways.

BETH ROHRLACH: Many people just don't know that these issues are here. I'm someone from the Blue Mountains. This huge population of the Blue Mountains has no idea of the animals living around them, and that would apply right across Sydney. The more you can get your community involved in these projects, the greater voice you're going to have politically.

HARRY RECHER: I put an advertisement, "Please, when you get home if you've got the Internet, Google "Roby lecture", R-O-B-Y lecture, "Murdoch University". You'll come up with a list of all the lectures ever given. They're all worth reading, right back to Charles Birch's first one in 1982. Mine's at the top of the list, 2014. I discuss everything you're talking about in that lecture. It's worth reading, worth listening to.

MIKE CALVER: (Murdoch University). I completely agree that raising community awareness is central. Just picking up on some of the ideas that came through there, on my own campus, Murdoch in Perth, I happened to be walking up a path behind a group of undergraduate students and a small bandicoot came out of the bush, crossed the path, disappeared into the bush on the other side of the path. The students were stunned. "Gee, what was that?" "Don't know. Sort of a long-nosed rabbit, wasn't it?" And the comment there about the general ignorance of flora and fauna, I think is very important and does need to be addressed through community education.

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[1] [TWIS – this week in science].

Another interesting thing though that I've been working on at the moment is on people's attitudes and practices with regard to their pet cats. Before everyone calls me a cat hater, I should have to say that I really like cats. The point that I want to make though is that surveys involved comparison of attitudes across a number of different countries, and guess what, in terms of being concerned about the impacts of pet cats on wildlife, Australians were right at the top of the pack and that includes Australians who own cats. Now, for those who are trying to get their local government authorities to do something about the control of pet cats, you find that it's actually quite difficult, and part of the attitude is that very, very vocal folk who are not in authority, hijack the political debate.

We need to raise community awareness. Very, very important. Once we get community awareness we need to engage with the political process. The better that engagement, the more effective it will be. Hey, we might get something done about unneutered, roaming pet cats, or alternatively, back at the turn of the 20th century we might have kept the South Dandalup Reserve.

JACQUI COUGHLAN: (ecological consultant). Harry, I just wanted to ask you, with those couple of examples, given all the inadequacies that you pointed out in the way we come about our reserves, do you think it better than nothing or would we have been better off just leaving it as it was, given that they're overgrown with exotic grasses and the water quality is diminished? In those particular sort of small examples, where you would've preferred to have seen a better landscape approach, do you actually think it was a waste of time and cost more management than it is worth to preserve what's left there?

HARRY RECHER: No, they're better than nothing, but just seeing how much better they could have been - and as far as whether we should have nothing, I had a meeting two years ago with Parks about my study sites where I have worked since 1967 in the Brisbane Water National Park. It is now being subjected to a seven-year burning cycle, and my comment to the staff of that park - and they're just being pushed politically to protect the houses in Pearl Beach - I said, "If you manage to burn Brisbane Water National Park every seven years, then you may as well sell the place for housing," because it's rapidly becoming just like Ku-ring-gai Chase, another place we may as well sell for housing because the management, forced onto the Service in some parts, is destroying it with too frequent fires.

We are getting to that stage where we might put up a radical proposal that's been put up before. Maybe it's time for people in New South Wales to start thinking about flogging off some of these urban national parks if they can get the money out of Treasury and use it to buy lands elsewhere in the State which will expand the representation and do better for biodiversity conservation than just more Hawkesbury sandstone.

JACQUI MARLOW (Northern Beaches Road Kill Prevention)**:** My question is actually directed at Peggy. I'm not a bat expert by any means. I know that you and Brad have been working incredibly hard and a lot of other people have been too. From what I understand, flying-foxes are moving more and more into the urban environment. There is a colony at Avalon in Terry Reserve. It wasn't there 20 years ago and the residents are quite rabid because bats are nasty, smelly creatures that could infect them. Anyway, my question is: have you got any suggestions on how we're going to protect our grey-headed flying-fox populations and other bat populations given we've got the problem of mass die-offs with climate change as well?

PEGGY EBY (ecological consultant)**:** I interpret flying-foxes coming into the city differently to many people. What's happening in Sydney and in Brisbane and Newcastle and on the Gold Coast is not that there are more flying foxes in an urban area most of the time. Most of the time, the numbers haven't changed. What they're doing is breaking into small groups. They do that to increase the density of their nesting sites so that they can reduce their feeding distances, that is the distances they commute between their roosting and where they're feeding. That's their greatest energetic cost to them in a daily cycle. Once the bats would disperse into smaller groups when there was insufficient food, and when the food shortage finished, they would come back to the major camps so the number of camps in time wasn't changing.

But over the last 10 years in Sydney the number of camps has rocketed from 7 to 20, but it hasn't happened consistently. It's happened in a stepwise progression. So our understanding is that the numbers of bats in urban areas during winter are increasing, but during summer, there's been no change in the number of bats in Sydney. It's complex. It's hard to explain, but in fact what we are definitely doing is shooting the messenger. These grey-headed flying-foxes are in strife.

The establishment in Adelaide, in Bendigo, all of those new locations are associated with food shortages. So the flying-foxes are moving into marginal habitats and are staying there and, unfortunately, it's not only causing social problems, it's causing agricultural problems because during food shortages they're more likely to cause a lot of damage to food crops and there's increasing evidence that animals experiencing chronic nutritional stress are more likely to be shedding viruses, so there is this unfortunate linkage between the number of very difficult management issues that are being misinterpreted. The cause of which is really, as best as we understand it, a problem of winter food.

Do I have a solution? We could plant winter food trees. What do you think?

DEBBIE ANDREW: (Office of Environment and Heritage). Harry, I could have a long conversation with you about a lot of those points, but in respect to the reserve program and its establishment over the last 30 years, I have been lucky to have been involved in that with the national park service and have worked with Peter Hitchcock in the past and the whole reserve establishment program has been a developing science. I am pleased to say that fauna survey and fauna values have made increasing important contributions in the identification of the reserve system.

It could potentially be the role of this society to make comment to government about a) the loss of important biologist positions from government departments like National Parks and Forestry who are doing fantastic ecological work, as well as b) the loss of funding to the reserve establishment program to buy the freehold lands which we don't get for nothing and are expensive, c) the dismantling of very important environmental legislation, d) the protection of old-growth trees in the Western Slopes and roadside reserves, and e) the whole slanting of the funding towards an agricultural scene without necessarily any good science. I'm sad to say to the science teacher, she's not aware of the National Parks fantastic BioNet system.

The Blue Mountains National Park is one of the best surveyed parks in the region. It is completely mapped vegetation-wise, it's had extensive fauna surveys, and all this information is available to the public via BioNet. You can print out a list of species found in Blue Mountains National Park, and in fact any national park or any geographic area in New South Wales for which it is actually vetted for its accuracy, unlike some of the other community programs. And I know that Dan, over his more than 40 years involvement, has always engaged with the community and has received a lot of information. So, yes, Harry, it's a developing science.

The littoral rainforests were then protected in the littoral rainforest SEPP [State Environmental Planning Policy] put forward by Peter Hitchcock and it shows you what is possible by a few very motivated, dedicated people. We got the rainforest passed because Peter Hitchcock flew Neville Wran around New South Wales in a helicopter, and we don't see that kind of proactive engagement with politicians now by public servants. They're all too bound by their contracts and we haven't even had an opportunity to engage with the new minister, who may have potential but we're just yet to see something happen. So I'm hoping we will see some action from the new minister, and it's up to our society to engage with young people and inspire them about the natural world and question politicians and comment on management plans and comment on reserve strategies.

STEPHEN AMBROSE: (ecological consultant). First of all, I'd like to compliment all four speakers for the sentiments they expressed this morning, but I'm particularly supportive of the view that Harry has put forward this morning. I've had close to 40 years association with the Eyre Bird Observatory which is at the eastern-most extremity of the Great Western Woodlands area. It's in coastal Mallee and one particular species that I can talk about which supports the points of view that Harry's been making would be the white-fronted honeyeater.

Prior to 1981, the most abundant honeyeater around the bird observatory was the purple-gaped honeyeater, and there was one historical record of the white-fronted honeyeater, which is a semi-arid and arid zone honeyeater, but literally overnight tens of thousands of white-fronted honeyeaters moved into the Mallee woodland around the Eyre Bird Observatory. We don't know where they came from, but when those tens of thousands of white-fronted honeyeaters did move in overnight they drove out the purple-gaped honeyeaters, which had been the staple honeyeater species of the region. Where the purple-gaped honeyeater went, we don't know.

Now, that white-fronted honeyeater stayed in the region around the observatory for about three years, began to taper off - well, actually stayed around the region for about 10 years but began to taper off in abundance quite markedly after three years. So by the time the 1990s came around it had completely disappeared. Now, if we were just reserving areas of land either as small islands or for wilderness value, without respecting the ecological processes in which those two honeyeater species were found, then we're probably not likely to adequately conserve the habitat of those two species in that region. If we had a better understanding of the ecology of the Great Western Woodlands, and in particular those two particular species, then maybe we would be better able to conserve landscapes for biodiversity.

PLENARY 2 CONCLUDED

PHOTOGRAPHS

Jennifer Clarke (RZS councillor) chair (all photos by Dan Lunney)

Mike Calver

Paul Adam

Peggy Eby

Harry Recher

Audience

TANYA
LEARY
NPWS

Tanya Leary and Chris Dickman